1 Getting Started

1-A Accessories

☐ AC Adaptor.....one ☐ Battery.....one

☐ Telephone Line Cord.....one

For Australia

For New Zealand

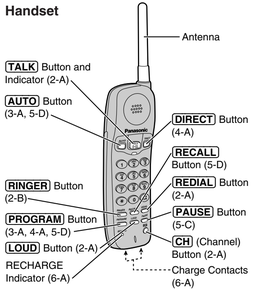
☐ Handset Cover .....one

For Australia only

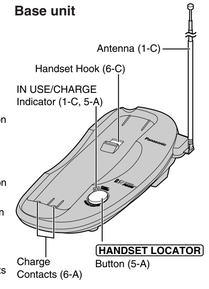
☐ Telephone Plug .....one

1-B Location of Controls

Handset

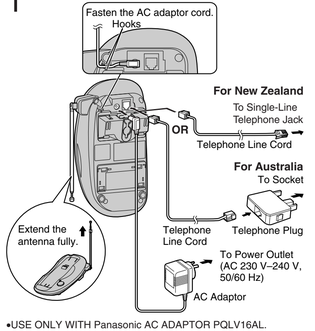


Base unit



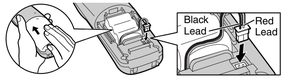
1-C Settings

1 Connect as shown.



- USE ONLY WITH Panasonic AC ADAPTOR PQLV16AL.
- The AC adaptor must remain connected at all times. (It is normal for the adaptor to feel warm during use.)
- This unit will not function during a power failure. If you want to connect a standard telephone on the same line;
  - KX-TC2000AL: Use a telephone double adaptor.
  - KX-TC2000NZ: Use a T-adaptor.
- KX-TC2000AL and KX-TC2000NZ are not designed to be used with rotary (pulse dialling) services.

2 Install the battery in the handset, and close the handset cover, locking it into place.



To replace the battery:
Press the notch on the cover firmly and slide it as indicated by the arrow. Replace the old battery with new one (6-A). Close the cover and charge for about 15 hours.

- Be sure wires are free from being pressed by the battery body or the handset cover.

STOP 3 Charge the battery for about 15 hours.

- See section 6-A for more details.
- The IN USE/CHARGE indicator lights.

2 Making/Answering Calls

2-A Making Calls

1 Press TALK.
- The TALK indicator lights.
- If an alarm tone sounds, see 6-D.

2 Dial a phone number.

3 To hang up, press TALK or place the handset on the base unit.
- The indicator light goes out.

- For best operating performance, see section 6-B.
- When dialling additional numbers after speed dialling [eg, AUTO (3-B), DIRECT (4-B) or REDIAL], make sure that speed dialling is finished before entering additional digits. Otherwise, the unit may not dial correctly.

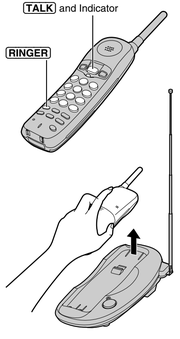
To redial the last number dialled
Press TALK ➔ REDIAL.

To select the handset receiver volume
Press LOUD while talking.
- Each time you press the button, the volume level will change to LOW (preset) or HIGH.

If noise interferes with the conversation
Press CH to select a clearer channel or move closer to the base unit.

Backlit handset keypad
The handset dialling buttons will light when you press a button or lift the handset off the base unit, or when a call is received. The lights will go out a few seconds after pressing a button, lifting the handset or answering a call.

2-B Answering Calls



If the handset is off the base unit, press TALK.
- You can also answer a call by pressing any dialling button (0 to 9, ✱ or #) (—**Any Key Talk**).

OR

If on the base unit, just lift up.

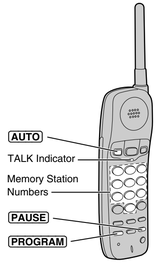
Selecting the ringer volume
The TALK indicator light must be off.
- **To select HIGH (preset) or LOW,** press RINGER. Each time you press the button, the ringer volume will change and the selected volume will ring.
- **To turn the ringer OFF,** press and hold RINGER until a beep sounds.
- **To turn the ringer ON,** press RINGER.

For New Zealand Users Only: Additional Security Feature
In the event that a call cannot be made from the handset following a power interruption, disconnect the base unit from the line momentarily then reconnect it. Turn the handset off, and replace it on the base unit.
This will re-establish the security system and the handset can be used as before.

3 Speed Dialler

3-A Storing Phone Numbers in Memory

You can store up to 10 phone numbers. The dialling buttons (0 to 9) function as memory stations.
The TALK indicator light must be off before programming.



1 Press PROGRAM.
- The TALK indicator flashes.

2 Enter a phone number up to 16 digits.

3 Press AUTO.

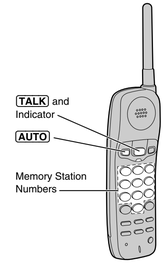
4 Press a memory station number (0 to 9).
- A beep sounds.
- To store other numbers, repeat steps 1 through 4.

- If a pause is required for dialling, press PAUSE where needed. Pressing PAUSE counts as one digit (5-C).

If you misdial
Press PROGRAM to end storing. ➔
➔ Start again from step 1.

To erase a stored number
Press PROGRAM ➔ AUTO ➔
➔ the memory station number (0 to 9) for the phone number to be erased.
- A beep sounds.

3-B Dialling a Stored Number



1 Press TALK.
- The TALK indicator lights.

2 Press AUTO.
- The TALK indicator flashes.

3 Press the memory station number (0 to 9).
- The stored number is dialled.

4 One-Touch Dialler

4-A Storing a Phone Number in the DIRECT Button

A phone number stored in the DIRECT button can be dialled with a one-touch operation.
The TALK indicator light must be off before programming.

1 Press PROGRAM.
- The TALK indicator flashes.

2 Enter a phone number up to 16 digits.

3 Press DIRECT.
- A beep sounds.

- If a pause is required for dialling, press PAUSE where needed. Pressing PAUSE counts as one digit (5-C).

If you misdial
Press PROGRAM to end storing. ➔
➔ Start again from step 1.

To erase a stored number
Press PROGRAM ➔ DIRECT.
- A beep sounds.

4-B Dialling a Stored Number in the DIRECT Button

1 Press TALK.
- The TALK indicator lights.

2 Press DIRECT.
- The stored number is dialled.

5 Special Features

5-A Handset Locator

You can locate the handset or page the handset user with beep tones.

1 Press **HANDSET LOCATOR** on the base unit.
- The IN USE/CHARGE indicator flashes and the handset beeps for 1 minute.

2 To stop paging, press **HANDSET LOCATOR** again or press **TALK** twice on the handset.

5-B Automatic Security Code Setting

Whenever you place the handset on the base unit, the unit automatically selects one of 65,000 security codes. These codes help prevent the unauthorized use of your telephone line by another cordless telephone user.

5-C Using the PAUSE Button (For PBX Line/Long Distance Calls)

We recommend you press **PAUSE** if a pause is required for dialling with a PBX or to make a long distance call.

Eg: Line access number **9** (PBX)
9 ➜ **PAUSE** ➜ Phone number

- Pressing **PAUSE** once creates a 3.5 second pause. This prevents misdialling when you redial or dial a stored number.
- Pressing **PAUSE** more than once increases the length of the pause between numbers.

5-D RECALL Button

Pressing **RECALL** allows you to use special features of your host PBX such as transferring an extension call or accessing optional telephone services such as call waiting.

Selecting the recall time

The recall time depends on your telephone exchange or host PBX. You can select the following recall times: "90, 100, 110, 250, 300, 400, 600 or 700 msec (milliseconds)". KX-TC2000AL comes from the factory set to "100 msec" and KX-TC2000NZ comes set to "600 msec".
The TALK indicator light must be off before programming.

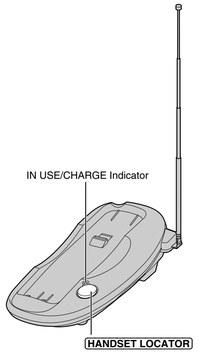
Press **PROGRAM** ➜ Dialling button (**1** to **8**) ➜ **AUTO** ➜ **RECALL**.
1: 90 msec **2**: 100 msec **3**: 110 msec **4**: 250 msec
5: 300 msec **6**: 400 msec **7**: 600 msec **8**: 700 msec

- A beep sounds.
- If 3 beeps sound after programming, a wrong key was pressed. Start again from the beginning.
- Users in Australia can access Telstra's "EASY CALL" service by having the recall time set at 100 msec (this is the factory default setting), and then follow Telstra's "EASY CALL" instructions to operate this service.
- If the unit is connected via a PBX, PBX functions (transferring a call etc.) might not work correctly. Consult your PBX supplier for the correct setting.
- When you receive a second call during a conversation, you will hear a signal tone following the call waiting tone and the conversation will be interrupted for approximately a second. The tones are generated from the telephone company. This is not fault of the product as these events are normal.

For Call Waiting Service Users in New Zealand

Make sure the recall time is set to 600 msec for use with Telecom's Call Waiting Service. Press **RECALL** if you hear a call-waiting tone while talking.

- The first call is put on hold and you can answer the second call.
- To return to the first caller, press **RECALL** again.

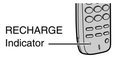


6 Things You Should Know

6-A Battery

Recharge

When the RECHARGE indicator flashes or the unit beeps intermittently, place the handset on the base unit for about 15 hours to recharge the battery.



Battery information

After your Panasonic battery is fully charged:

Operation	Operating time
While in use (TALK)	Up to about 5 hours
While not in use (Standby)	Up to about 14 days

- The battery operating time may be shortened depending on usage conditions and ambient temperature.
- **As preventative maintenance, clean the handset and the base unit charge contacts with a soft, dry cloth once a month. Clean more often if the unit is subject to grease, dust or humidity.** Otherwise the battery may not charge properly.
- If the battery is fully charged, you do not have to place the handset on the base unit until the RECHARGE indicator flashes. This will maximize the battery life.
- The battery cannot be overcharged.

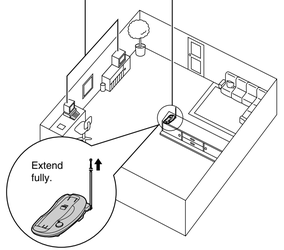
Battery replacement:
If you cleaned the charge contacts and fully charged the battery, but after a few telephone calls, the RECHARGE indicator flashes, the battery needs to be replaced. Replace the battery with a new Panasonic P-P301 (KX-A36A) battery. See section 1-C, step 2. When replacing the battery, programmed information may be erased. Reprogram if necessary.

6-B Base Unit Location

Calls are transmitted between the base unit and the handset using wireless radio waves. **For maximum distance and noise-free operation,** the recommended base unit location is:

Away from electrical appliances such as a TV, personal computer, cellular phone charging units or another cordless phone.

In a HIGH and CENTRAL location with no obstructions such as walls.

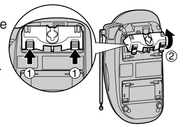


6-C Wall Mounting

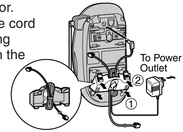
This unit can be mounted on a wall.

1 Pull down the handset hook until it locks, **so the tab holds the handset.**

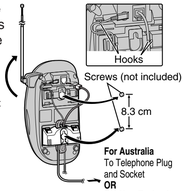
2 Press the tabs in the direction of the arrows (①), then remove the wall mounting adaptor (②).



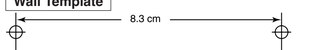
3 Connect the AC adaptor. Tuck the telephone line cord inside the wall mounting adaptor, then push it in the direction of the arrows (① and ②).
- The word "UP WALL" should face upward.



4 Connect the telephone line cord. Install screws using the wall template below. Mount the unit, then slide down.
- Extend the antenna fully.
- Fasten the cords to prevent it from being disconnected.



Wall Template



6-D Troubleshooting

Problem	Cause and Remedy
The unit does not work.	•Check the settings (1-C). •Charge the battery fully (6-A). •Clean the charge contacts and charge again (6-A). •Install the battery properly (1-C, 6-A). •Place the handset on the base unit and unplug the AC adaptor to reset. Plug in, and try again. •Re-insert the handset battery and place the handset on the base unit. Try again. •KX-TC2000AL and KX-TC2000NZ are not designed to be used with rotary (pulse dialling) services.
An alarm tone sounds when you press TALK.	•You are too far from the base unit. Move closer and try again. •Place the handset on the base unit and try again. •Plug in the AC adaptor. •Extend the base unit antenna fully.
Static, sound cuts in/out, fades. Interference from other electrical units.	•Locate the handset and the base unit away from other electrical appliances (6-B). •Move closer to the base unit. •Extend the base unit antenna fully. •Press **CH** to select a clearer channel.
The unit does not ring.	•The ringer volume is set to OFF. Press **RINGER** when the TALK indicator light is off (2-B).
While storing a phone number, the unit starts to ring.	•To answer the call, press **TALK**. The program will be cancelled. Store the number again.
You cannot store a phone number in memory.	•You cannot store a number while the unit is in the talk mode. •Do not pause for over 60 seconds while storing.
You cannot redial by pressing REDIAL.	•If the last number dialled was more than 24 digits long, the number will not be redialled.
HANDSET LOCATOR does not function.	•The handset is too far from the base unit or is engaged in an outside call.
The RECHARGE indicator flashes or the unit beeps intermittently.	•Charge the battery fully (6-A).
You charged the battery fully, but the RECHARGE indicator flashes.	•Clean the charge contacts and charge again (6-A). •Install a new battery (6-A).
The IN USE/CHARGE indicator light does not go out while charging.	•This is normal.

For Australia Customers
Panasonic Australia operates a toll free Customer Support Centre. Please phone Panasonic on 132600 for assistance.
For New Zealand Customers
Panasonic New Zealand operates our Customer Support Centre. Please phone (09) 272 0178 for assistance.

6-E Safety Instructions

Take special care to follow the safety suggestions listed below.

Safety
1) The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.
2) When left unused for a long period of time, the base unit should be unplugged from the household AC outlet.
3) To minimize the possibility of lightning damage when you know that a thunderstorm is coming, we recommend that you:
a) Unplug the telephone line cord from the phone jack.
b) Unplug the power supply cord from the AC power outlet.

Installations
Environment
1) Do not use this unit near liquids—for example, near a bathtub, washbowl, sink, etc. Damp environments should also be avoided.
2) The unit should be kept away from heat sources such as heaters, kitchen stoves, etc. It also should not be placed in rooms where the temperature is less than 5°C or greater than 40°C.
3) The AC adaptor is used as the main disconnect device, ensure that the AC outlet is located/installed near the unit and is easily accessible.

Placement
1) Do not place heavy objects on top of this unit.
2) Care should be taken so that objects do not fall onto, and liquids are not spilled into, the unit. Do not subject this unit to excessive smoke, dust, mechanical vibration, or shock.
3) Place the unit on a flat surface.

For best performance
1) If noise prevents the conversation from being understood at the handset, approach the base unit to lessen the noise.
2) The handset should be used at the HIGH volume setting when the reception audio is difficult to hear.
3) The handset should be fully recharged on the base unit when the RECHARGE indicator flashes.
4) The handset antenna should not be touched during use because it can effect the handset's performance.
5) The maximum calling distance may be shortened when the unit is used in the following places: Near obstacles such as hills, tunnels, undergrounds, near metal objects such as wire fences, etc.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO LIQUID OR ANY TYPE OF MOISTURE.
When a failure occurs which results in the internal parts becoming accessible, disconnect AC adaptor immediately and return this unit to the place of purchase or service centre.
If there is any trouble, disconnect the unit from the telephone line and connect a known working phone. If the known working phone operates properly, do not reconnect the unit to the telephone line until the fault has been repaired. If the known working phone does not operate properly, consult your telephone company.
This equipment has been tested and found to comply with AS/NZS 3548:1995 limits for electromagnetic interference. Any modifications to any part of the system or to any peripherals may void the EMC compliance of the system or the peripherals.
This equipment will be inoperable if mains power fails.

WARNING:
The earcap on the handset is magnetised and may retain metallic objects.

For New Zealand Users Only
The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.
WARNING NOTICE:
No "111" or other calls can be made from this device during a mains power failure. This equipment shall not be set to make automatic calls to the Telecom "111" Emergency Service.
- We recommend that a standard phone which can be used in the case of a power failure be connected to the telephone line at all times.
- This equipment should not be used under any circumstances which may constitute a nuisance to other Telecom customers.

6-F Specifications

■ **Base unit**

Power Supply:	AC Adaptor (230–240 V AC, 50/60 Hz)
Power Consumption:	Standby: Approx. 5 W Maximum: Approx. 7 W
Frequency:	30 MHz – 39 MHz
Dimensions (H x W x D):	Approx. 80 mm x 125 mm x 210 mm
Mass (Weight):	Approx. 300 g

■ **Handset**

Power Supply:	Ni-Cd battery (3.6 V, 300 mAh)
Frequency:	30 MHz – 39 MHz
Dimensions (H x W x D):	Approx. 278 mm x 54 mm x 40 mm
Mass (Weight):	Approx. 190 g
Security Codes:	65,000

■ **Operating Environment:** 5 °C – 40 °C

Specifications are subject to change without notice.

For your future reference

Serial No. Date of purchase
(found on the bottom of the unit)

Name and address of dealer

Attach or keep original receipt to assist with any repair under warranty.

Panasonic Communications Co., Ltd.
1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka 812-8531, Japan

PQQX13660ZA S0503-1074

Panasonic

Cordless Phone

Operating Instructions

Model No. KX-TC2000ALB
KX-TC2000ALF/KX-TC2000ALS
KX-TC2000ALW/KX-TC2000NZB
KX-TC2000NZF/KX-TC2000NZW

KX-TC2000ALB

PLEASE READ BEFORE USE AND SAVE.

Charge the battery for about 15 hours before initial use.

Contents by Section

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